#### INTERNATIONAL SEARCH REPORT

International application No. PCT/KR2004/001757

## A. CLASSIFICATION OF SUBJECT MATTER

## IPC7 A01K 13/00

According to International Patent Classification (IPC) or to both national classification and IPC

#### B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) A01K 13/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Korean patents and applications for inventions since 1975, Korean utility models and applications for utility models since 1975 and Japanese utility models and applications for utility models since 1975

Electronic data base consulted during the intertnational search (name of data base and, where practicable, search terms used) PAJ,IBM,USPTO,Delphion,e-KIPASS

# C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
. X	JP63-193453(Asano Makoto et al.) Dec.13, 1988 see claims 1-4: in terms of novelty see claims 1,2: in terms of inventive step	1,8-11,26 12,25,35
· А	JP63-002477(Sanyo Electric Co.,Ltd) Jan.9,1988 see the whole document	1-26
A	JP63-165148(Hidachi Shipbuilding Co.,Ltd) Oct.17,1988 see the whole document	1-26
A	US 5662069(Leonard Smith) Sep.2,1997 see the whole document	1-26
A	US 5243931(Richard W.McDonough) Sep.14,1993 see the whole document	1-26

see the whole document		
Further documents are listed in the continuation of Box C.  See patent family annex.		
* Special categories of cited documents:  "A" document defining the general state of the art which is not considered to be of particular relevance  "E" earlier application or patent but published on or after the international filing date  "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)  "O" document referring to an oral disclosure, use, exhibition or other means  "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art  "&" document member of the same patent family	
Date of the actual completion of the international search	Date of mailing of the international search report	
03 DECEMBER 2004 (03.12.2004)	04 DECEMBER 2004 (04.12.2004)	

Authorized officer

KIM, Tae San

Telephone No. 82-42-481-5633

Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea

Name and mailing address of the ISA/KR

Facsimile No. 82-42-472-7140